

# Opportunities for Cerulean Warbler Conservation During the Breeding Season



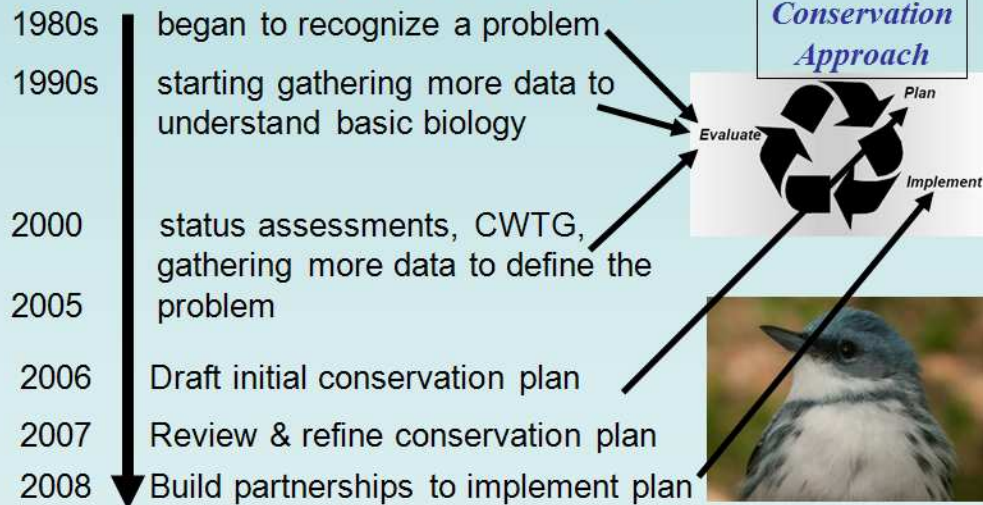
Developing Conservation Actions for  
Addressing Threats & Limiting Factors

*Randy Dettmers*  
*U.S. Fish and Wildlife Service*

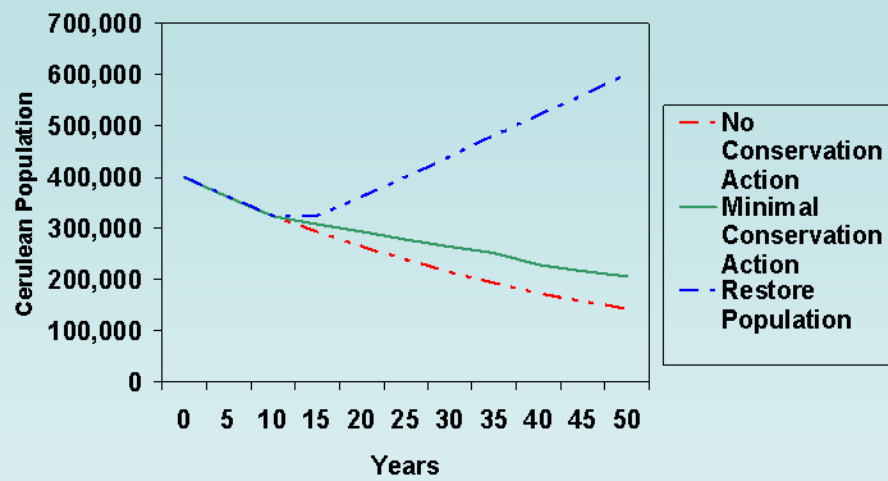


# Cerulean Warbler Conservation Initiative

## Where are we now?



## Our Conservation Objective



“Restore Cerulean Warblers to 1980s Population Levels within 50 years”

## Breeding Season Threats/Limiting Factors



Reduced Quantity of Breeding Habitat due to large-scale loss of forest habitat



High Nest Depredation & Parasitism Rates due to forest fragmentation



Reduced Quality of Breeding Habitat due to lack of appropriate forest structure

**Reduced Breeding Productivity**

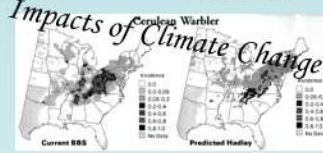
## Breeding Season Threats/Limiting Factors



Reduced  
Quantity/Quality of  
Post-Fledging  
Habitat??



*Impacts of Avian Diseases  
and Contaminants*



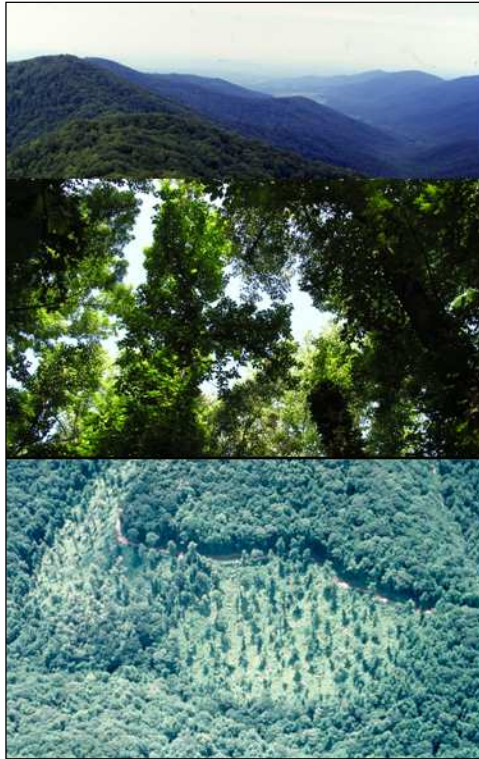
Possible Impacts from  
Non-Habitat Threats

**Reduced Survival or  
Condition**

## ***Actions for Addressing Breeding Season Threats/Limiting Factors***

- **Develop and Implement Forest Management Recommendations**
- **Reduce Forest Fragmentation and Prevent Major Forest Loss**
  - ***Develop and Implement Coal Surface Mine Reclamation Guidelines***
- **Identify and Manage for High Quality Post-Fledging Habitat**
- **Reduce Critical Information Gaps**
- **Education Programs to Raise Awareness**
- **Assess Potential Impacts of Non-habitat Threats**





***Improve and protect  
breeding habitat***

**Develop and  
implement region-  
specific forest  
management  
guidelines**

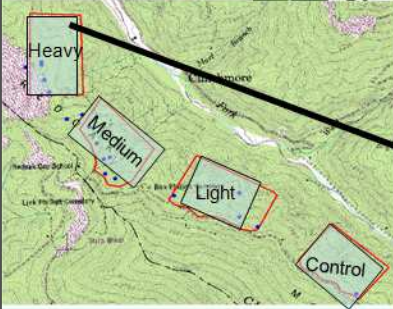
- Promote recommendations from meeting with Forest Industry
- Promote Sustainable Forest Management; inform certification programs
- Engage/educate forest managers and the public
- Build partnership to support action

*Develop and implement forest management for Cerulean Warblers*



Continue research to  
develop better  
description of “good”  
breeding habitat

*Example: Cooperative  
Cerulean Warbler Forestry  
Experiment*





*Develop and implement forest management for Cerulean Warblers*

- Collaborate with diverse stakeholders to identify best management practices
- Promote management cooperatives among multiple stakeholder groups

Forested Lands in Eastern USA



## Sustainably Managed Forest Resources



Natural regeneration



More growth than harvest

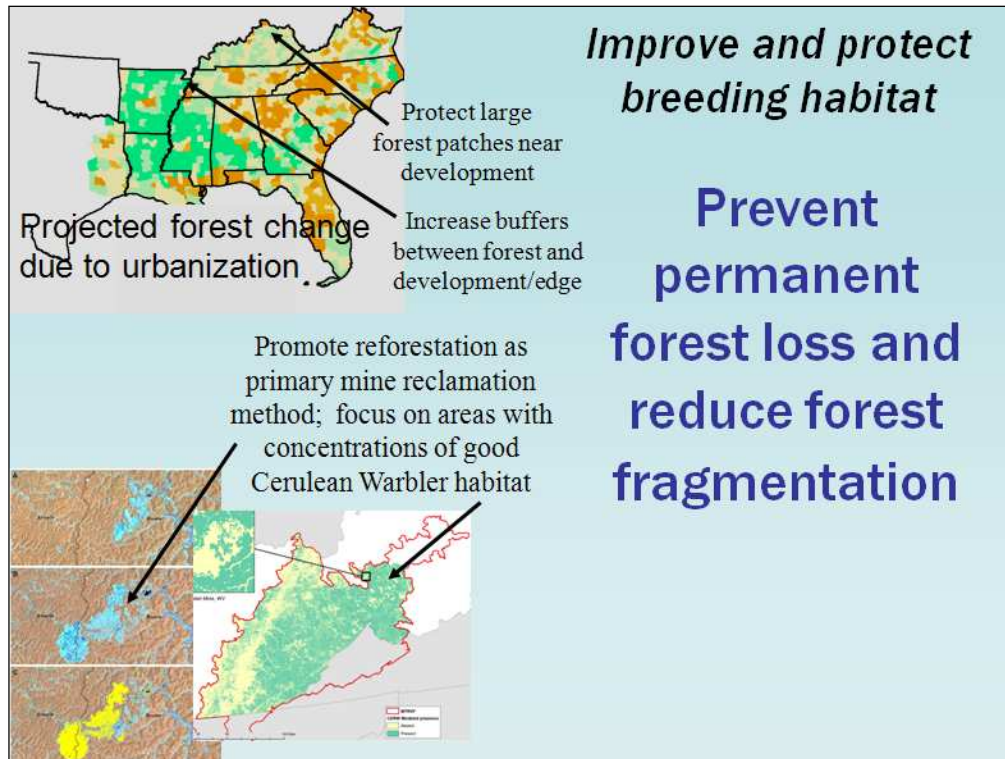


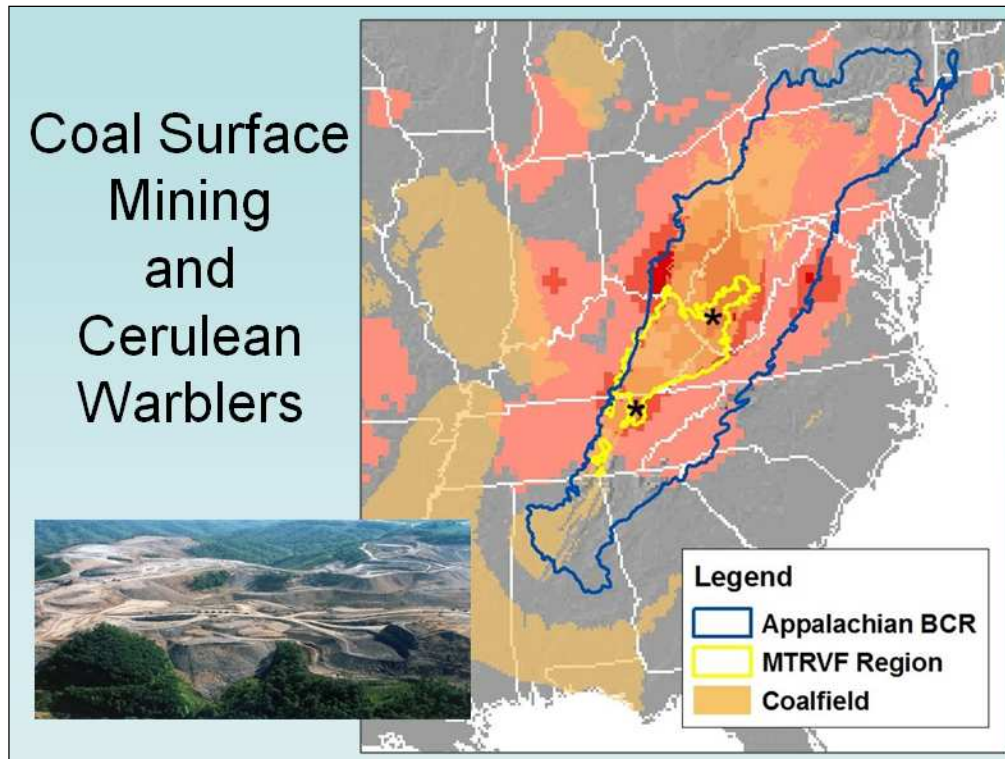
Sustainable forest management



Provides suitable breeding habitat







. . . much of the core range of the CERW, in dark red, falls within the Appal coalfield. So surface mining in general, but mt-top removal mining in particular, has been identified as a limiting factor for cerw populations.



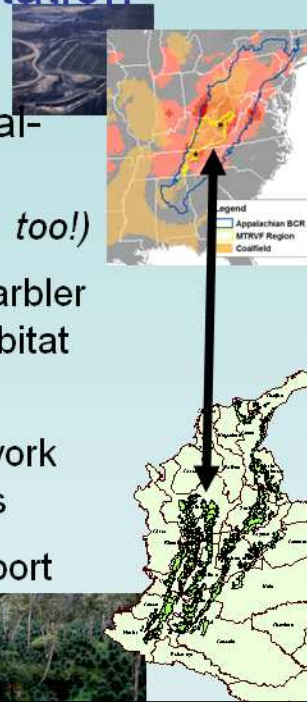
- This is the primary reason there are very few trees on surface mines...
- COMPACTION
- These dozer tread marks indicate that this slope on this surface mine is seriously compacted
- It will be very difficult for trees to grow here.



# Partnerships For Implementation

## International Connections

- Idea: Partnerships of Coffee-Coal-Cerulean Warbler organizations  
(*Golden-winged Warblers & Forestry, too!*)
  - for industry activities that affect Warbler habitat, need to restore/replace habitat
  - Warbler Groups can identify best locations for habitat projects and work with industries to complete projects
  - mechanisms available to help support such partnerships
  - Coal industry very interested



- Thank you for inviting me to speak about the current reforestation renaissance that is taking place on surface mines across the Appalachian coal fields
- Again, my name is Patrick Angel and I'm a forester with the Office of Surface Mining, in Interior
- I'm going to talk to you about the Appalachian Regional Reforestation Initiative which is referred to as ARRI

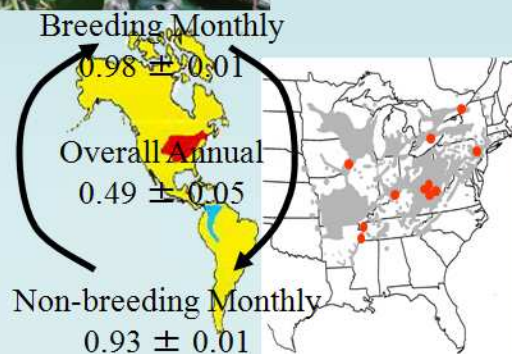




## Build awareness of migratory bird issues through education programs

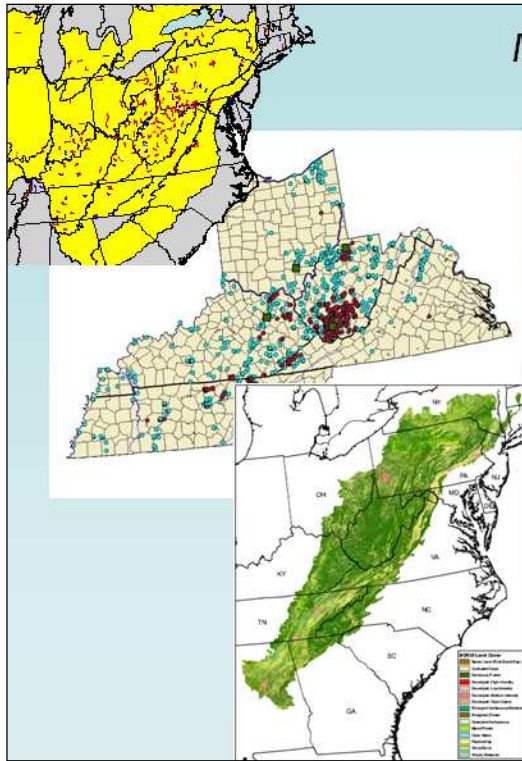


Could “Sister City”  
or “Sister  
Corporation”  
programs help to  
build awareness  
and appreciation?



### *Reduce knowledge gaps*

- Knowledge about females & juveniles
- Intrinsic limits to reproductive success
- Greatest limiting factors
- How demographics vary across range and seasons



### ***Monitoring and Evaluation***

- Use BBS to monitor population trend
- Build bird monitoring capacity on private lands and off-road
- Build evaluation into habitat management and reforestation projects

## Cerulean Warbler Conservation Initiative



### *Where do we need to go?*

1980s	began to recognize a problem
1990s	starting gathering more data to understand basic biology
2000s	Status assessment, CWTG
2007	Initial conservation plan
2008 & Future	Implement plan – manage habitats/reduce threats – monitor response to actions

- CWTG has shown the promise of multi-stakeholder initiative
- Needs partnership to continue and grow for further success